THERMA-TEK RANGE CORPORATION

"QUALITY AND STRENGTH"

FULL-SIZE GAS CONVECTION OVEN PARTS / SERVICE MANUAL

Model TFCO-GM-1 covered in this manual is shown with optional casters.

THERMA-TEK RANGE CORPORATION
115 ROTARY DRIVE – VALMONT IND. PARK
WEST HAZLETON, PA
TEL: 570-455-3000 FAX: 570-455-9491 WEB: WWW.THERMA-TEK.COM

INTRODUCTION

The Full-Size Gas Convection Oven Parts / Service Manual contains Installation and Operation Recommendations. It also includes Troubleshooting and Technical Data such as Orifice Hood Sizing and Gas Pressure Requirements.

The material presented should be used in conjunction with the Owner's Manual, Professional Training, Service Experience, and Industry Standard Practices.

TABLE OF CONTENTS PAGE

Model Number Identification…….3
Full-Size Gas Convection Oven Standard Features...……3
Rating Plate Location…….....3
Identifying the Age of Equipment by Warranty Number……..4
Gas and Electrical Requirements…….,……....5
Wiring Diagram……..6
Troubleshooting Guide……...7
Parts – Exploded View and Detail List……..8 – 10
Notes…….11

MODEL NUMBER IDENTIFICATION

TFCO-GM-1 (N OR L)

T (Therma) **F** (Full-size) **C** (Convection) **O** (Oven)
G (Gas) **M** (Manual control) – **1** (Single deck)
The Final Character **N** or **L** (NATURAL or LP Gas).

STANDARD FEATURES

60,000 BTU's /Hr. Natural Gas. 54,000 BTU's / Hr. Propane Gas.
Single door w/ heavy duty refrigerator latch.
Electro-mechanical control snap-action thermostat.
½ Hp 2 speed motor.
Six chrome plated racks w/ 12 rack positions.
Pressure regulator.
Stainless steel front, sides, top, legs, and single deck shelf.
3 wire, 15 amp cord and plug provided.

RATING PLATE LOCATION

The rating plate is located on the right – front of the oven – above the control panel. It contains the warranty serial number, installation clearances, and gas pressure information.

WARRANTY SERIAL NUMBER
THERMA-TEK SERIAL NUMBER & DATE CODE

Date of manufacture is a date code and is part of the serial number.

(a) (c)
Example: **09J00001A**
(b) (d)

(a)Year Code: Use the last two digits of the year.
07 = 2007
08 = 2008
09 = 2009

(b) Month Code: A=Jan, B=Feb, C=Mar, D=Apr, E=May, F=Jun, G=Jul, H=Aug, I=Sep **J=Oct**, K=Nov, L=Dec

(c)5 Digit **Serial Number**: This number is reset to zero on the new year.

(d) Engineering Digit: **"A"** is used for new release. Anytime a design element is changed that would affect service, this digit would be changed to "B". Each time a change is made, the letter is changed going down through the alphabet.

GAS REQUIREMENTS

MODEL	DESCRIPTION	TOTAL GAS CONSUMPTION	
TFCO-GM-1N	**Single deck, manual control, natural gas**	60,000 BTU's / Hr.	17.59 kW
TFCO-GM-1L	**Single deck, manual control, propane gas**	54,000 BTU's / Hr.	15.82 kW

(Double decking ovens doubles gas consumption.)

Operating Manifold Gas Pressure				Manifold Connection	Burner Orifice Drill Size	
Natural Gas		Propane Gas		¾" NPT	Nat #	LP #
5" WC	12.45 mbar	10" WC	24.9 mbar	¾ "Regulator Provided	L 44 R 41	L 55 R 53

ELECTRICAL REQUIREMENTS

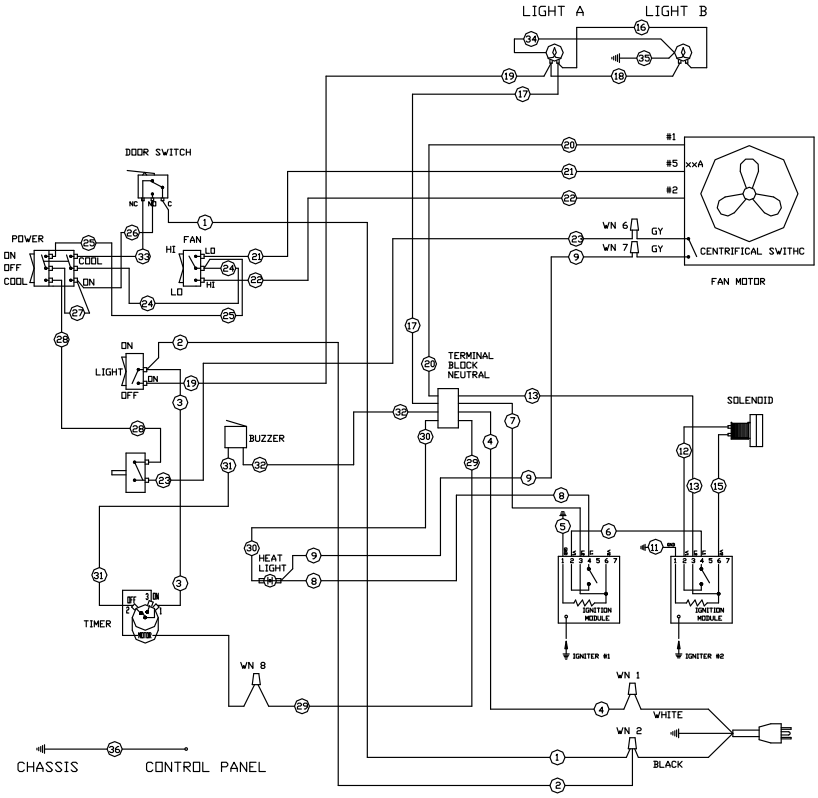
120v / 1 PHASE. 6.4 AMPS per oven

3 Wire 15 AMP Cord & Plug provided

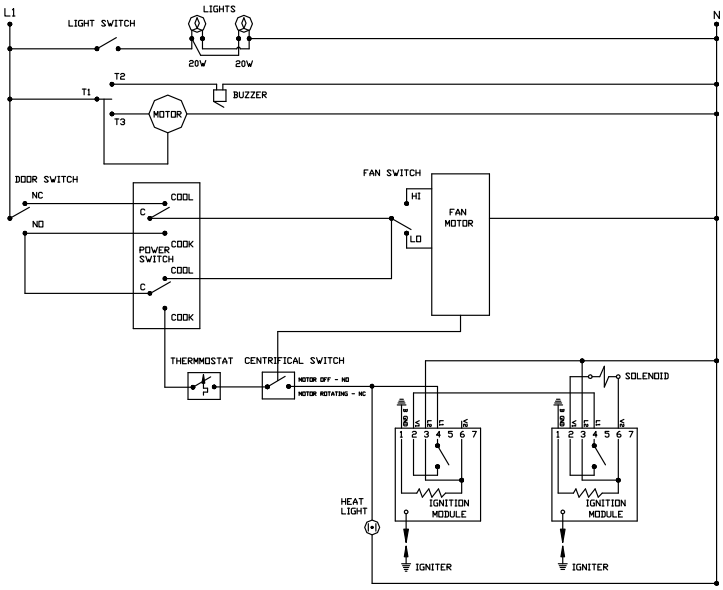
A wiring diagram is provided on the next page

THERMA-TEK
RANGE CORP.

WIRING DIAGRAM - TFCO-GM



SCHEMATIC - TFCO-GM



TROUBLESHOOTING GUIDE

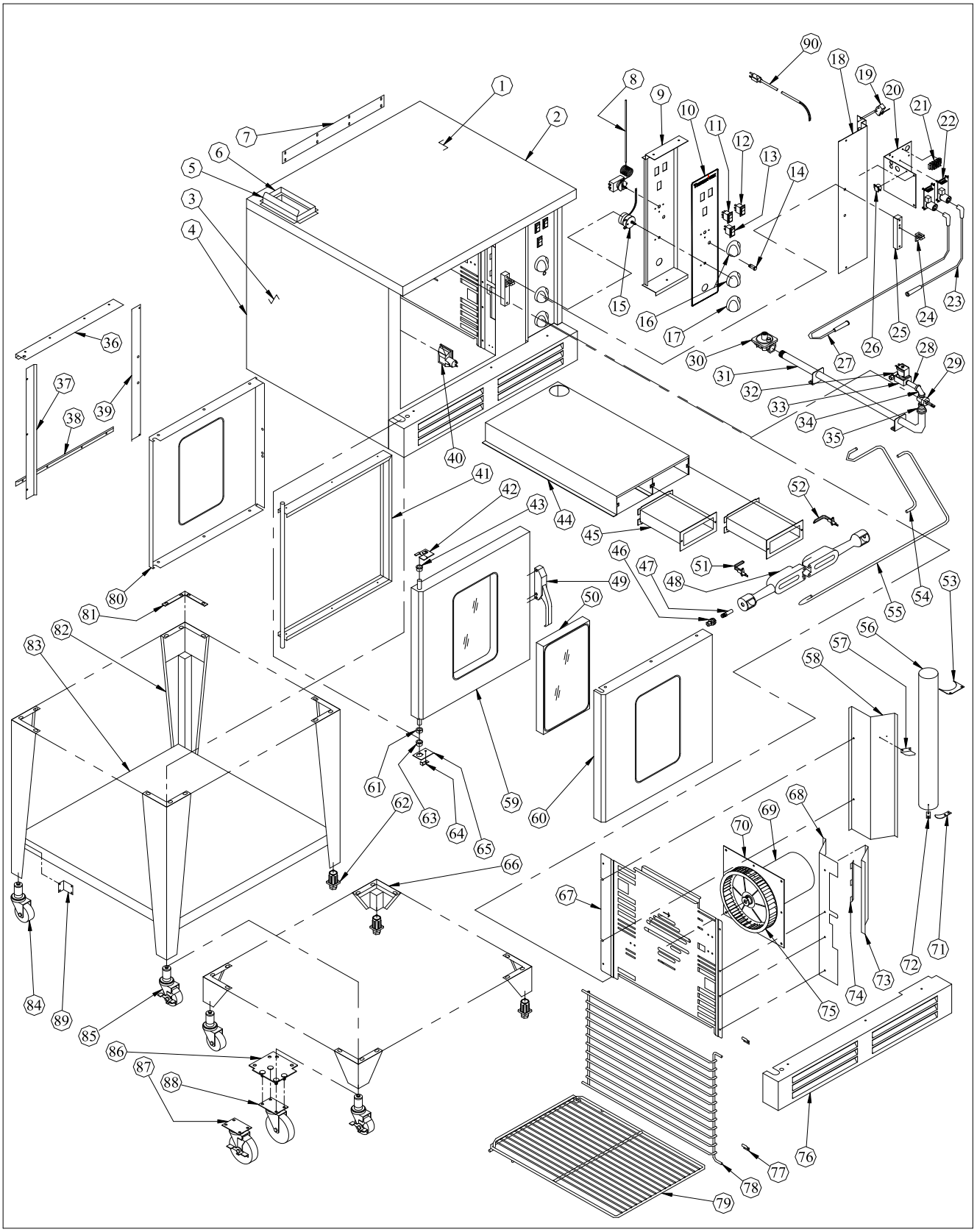
PROBLEM	POSSIBLE CAUSE	SOLUTION
Oven will not light.	Gas turned off.	Turn gas valve ON.
	Oven is not plugged in.	Plug in the electrical supply cord.
	Circuit breaker tripped.	Reset the breaker.
	Power switch on control panel is off.	Turn the power switch to Cook.
	Thermostat set lower than temperature in the oven	Set the thermostat to desired setting.
	Door switch not activating. Switch is bad.	Check door switch mechanism. Change switch.
	Solenoid valve not opening.	Check for loose wires, if bad replace.
	Low Gas Pressure	Adjust gas pressure.
	Igniter not sparking.	Check ignition cable is attached securely to igniter and ignition module. Check all wires on ignition module are secure.
Igniter sparking and gas flow present, burner won't light	Misalignment of igniter.	Realign igniter until proper ignition occurs.

Oven Ready light won't go off.	Oven has not reached set temperature	Wait for oven to reach set temperature.
	Oven burners did not light.	See solutions above.

Fan does not run.	Oven is not plugged in.	Plug in the electrical supply cord.
	Oven is not set to cook mode.	Turn the power switch to Cook
	Circuit breaker tripped.	Reset the breaker.
	Door is open.	Close door.
	Loose wire connections	Check Connections
	Check fan switch for continuity.	If bad replace switch.
	Check power switch for continuity.	If bad replace switch.
	Check door switch for continuity.	If bad replace switch.
	Power supplied, but motor won't run.	Failed motor, replace motor.

Oven lights won't come on	Oven not plugged in.	Plug in the electrical supply cord.
	Switch not activated	Turn light switch to ON position.
	Bulb burned out.	Replace bulb.*

*** CAUTION:** REPLACE LIGHT BULB & LENS WITH OEM PARTS.


1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
65
66
67
68
69
70
71
72
73
74
75
76
77
78
79
80
81
82
83
84
85
86
87
88
89
90

PARTS

Item Number	Part No.	Description
1	30573	Main Top
2	30571-02	Right Side Panel
3	30571-01	Left Side Panel
4	30574	Main Oven Back Panel
5	30556	Flue Cap Outer
6	30557	Flue Cap Inner
7	30638	Splice Plate Stacked Units
8	80060	Thermostat - Mechanical
9	30561	Control Panel - Mechanical
10	80053-01	Control Panel Overlay - Mechanical
11	80063-03	Rocker Switch - Power
12	80063-02	Rocker Switch - Fan Speed
13	80063-01	Rocker Switch - Lights
14	80064	Indicator Light
15	80059-01	Timer 1 HR
16	80000-02	Knob - Thermostat/Timer
17	80000	Knob - Gas Valve
18	30562	Right Side Trim
19	80075	Microswitch - Door
20	30566	Mounting Brkt Ignition Control/Terminal Block
21	80057	Terminal Block
22	80068	Ignition Module
23	80071-01	Electrode Wire Right - 2'
24	80073	Door Latch Includes Handle
25	30605-01	Door Catch Mounting Brkt Weld Assy
26	80065	Buzzer
27	80071-02	Electrode Wire Right - 4'
28	81036-01	Pipe Nipple
29	80061	Gas Valve
30	80026-01	Regulator NAT
	80026-02	Regulator LP
31	81040	Manifold
	30635	Manifold Assembly (includes items 28, 29, 31, 32, 33, 34, 35)
32	81027-01	Fitting Brass Tee
33	80062	Solenoid Valve
34	81038-02	Pipe Elbow
35	81045-01	Pipe Reducer
36	30538-01	Door Seal Top
37	30536-01	Door Seal Left
38	30535-01	Door Seal Bottom
39	30537-01	Door Seal Right
40	80076	Light
41	30586	Door Frame Weld Assy
42	30639	Hold Down Top Door Bushing Weld Assy
43	80074	Bushing Door
44	30585	Burner Box Weld Assy
45	30584	Burner Tube Weld Assy
46	81041	Orifice Fitting
47	81006-03	Orifice Left LP #55
	81006-04	Orifice Right LP #53
	81006-05	Orifice Left NAT #44
	81006-06	Orifice Right NAT #41

48	82005-01	Burner
49	80073	Door Handle Includes Latch
50	80072	Window
51	80070-01	Electrode Left
52	80070-02	Electrode Right
53	30546	Rear Tube Top Filler Plate
54	90054	Right Burner Tubing
55	90055	Left Burner Tubing
56	30598	3" Tube
57	30617	Rear Baffle Brkt
58	30582-02	Rear Tube Flue Cover Weld Assy
59	30631	Door Assembly (includes items 41, 42, 43, 49, 50, 60, 61, 63, 64, 65, 80)
60	30526-01	Door Panel
61	80079	Door Rod Spacer
62	80048-01	Bullet Feet Insert
63	80074	Bushing Door
64	30555	Bottom Door Bushing Anti Rotate Brkt
65	30640	Bottom Door Bushing Plate Weld Assy
66	30614-01	6" Leg Weld Assy
67	30597-01	Baffle Weld Assy
68	30524-02	Front Right Corner Panel Weld Assy
69	80067	Fan Motor
	30633	Motor Assembly (includes items 69, 70, 75)
70	30525-01	Motor Mounting Plate
71	30548	Rear Flue Tube Bracket Cover Plate
72	30547	Rear Flue Tube Bottom Mounting Bracket
73	30595-01	Bypass Panel Air Baffle
74	30551-01	Bypass Angle Bracket
75	80058	Blower Wheel
76	30570	Combustion Cover
77	30086	Oven Rack Clip
78	80052-01	Oven Side Rack
79	80051-01	Oven Center Rack
80	30527-01	Door Liner
81	30628	Leg Mounting Spacer
82	30614	Single Deck Leg Weld Assy
83	30613	Single Deck Shelf
84	80025-05	3" Insert Swivel Caster Without Brake
85	80025-06	3" Insert Swivel Caster With Brake
86	30644	Caster Mounting Plate Weld Assy
87	80025-02	5" Swivel Caster With Brake
88	80025-01	5" Swivel Caster Without Brake
89	30642	Shelf Leg Brkt
90	80056	Power Cord

NOTES